

REMARKS

Claims 1-19 are pending in this application.

No new matter has been added by this Amendment. By this Amendment, claim 1 has been amended merely to correct an informality. Claims 10 and 11 have been amended to address the 35 U.S.C. §112, second paragraph rejection. Claim 19 has been added. Support for claim 19 may be found on page 9, lines 15-20 of the specification and, for example, Figures 3 and 4.

I. Information Disclosure Statement

The Patent Office alleges that the information disclosure statement filed October 31, 2000 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of Japanese reference JP 06-098728 (JP '728). Therefore, Applicants respectfully submit the attached Abstract and machine translation of JP '728.

Further, Applicants have not received acknowledgement that the references listed on the previously submitted PTO Form-1449 forms have been considered. Therefore, for the Patent Office's convenience, Applicants respectfully submit copies of the PTO Forms-1449 filed on February 25, 2004, November 25, 2002, August 6, 2001 and October 31, 2000. The Patent Office is requested to initial and return the forms with the next communication.

II. Claim Objections

Applicants have amended claim 1 to read "an injection tube" instead of "a injection tube," as suggested by the Patent Office. Therefore, withdrawal of the claim correction requirement is respectfully requested.

III. Allowable Subject Matter

Applicants note with appreciation that the Patent Office finds claims 7 and 14 allowable.

IV. Claim Rejections Under 35 U.S.C. §112

A. First Paragraph

Claims 1-18 were rejected under 35 U.S.C. §112, first paragraph because the specification allegedly is not enabling of the claimed invention. This rejection is respectfully traversed.

Contrary to the Patent Office's assertion, the claimed invention is enabled throughout the entire specification. The features and structures of the present invention are explained in detail throughout the specification of the present application such that one of ordinary skill in the art would be able to make and use the presently claimed invention. Specifically, the connection between the discharge vessel and the storage vessel via the flow path is described and shown in, e.g., Figures 2 and 3, such that one of ordinary skill in the art would have been able to make the claimed invention from the description.

If the Patent Office continues to believe that claims 1-18 are not enabling, Applicants have added new claim 19 to further explain the location of the flow path.

Thus, reconsideration and withdrawal of the rejection are respectfully requested.

B. Second Paragraph

Claims 10 and 11 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. This rejection is respectfully traversed.

The Patent Office alleges that it is unclear what the surface shape of the discharge vessel is referring to and how to determine the center of the surface shape. Applicants respectfully disagree.

As discussed in the specification, the discharge vessel may have various cross-sectional shapes, e.g., circular, elliptical, square or rectangular. See page 15, lines 20-28 of the specification. The discharging inlet is located at or near the center axis of the cross-section, as clearly defined in Figure 2.

Further, one of ordinary skill in the art would be aware of various methods to calculate the center, or the approximate center, of the given geometric cross-sectional shape.

Thus, reconsideration and withdrawal of the rejection are respectfully requested.

V. Claim Rejections Under 35 U.S.C. §102(b)

A. Anscherlik

Claims 1 and 8-12 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 3,085,717 (Anscherlik). This rejection is respectfully traversed.

Applicants respectfully disagree with the Patent Office's assertion that Anscherlik teaches a discharge tube. Anscherlik relates to an automatic pipette. Referring to Fig. 1 and the related description of Anscherlik, a liquid 31 is charged into a storage tank 3 at a given level 33, and the storage tank 3 is connected to a transfer vessel 8 via the narrow pipe 7. A siphon tube 82 is connected to the bottom of the transfer vessel 8 with a bight portion 83. The transfer vessel 8 is also connected to a bulb 1 via a connecting tube 2. The bulb 1 is connected to the siphon tube 11 and the bight portion 12.

In the automatic pipette of Anscherlik, the fluid is introduced into the tube 4 along the arrow 41, and the interior pressure of the pressure tube 6 is set to a pressure more than atmospheric pressure. Then, a given liquid is introduced into the transfer vessel 8 via the connecting pipe 2, and the remnant of the liquid is absorbed into a receiving vessel 5 via the siphon tube 11 and discharged. In contrast, the liquid introduced into the transfer vessel 8 is discharged into a dump vessel 9 via the siphon tube 82.

If no liquid is charged into the siphon tubes, the liquid is charged from the storage tank 3. In this case, the liquid is supplied into the bulb 1 from the transfer vessel 8 via the connecting pipe 2. Also the connecting position of the connecting pipe 2 is set lower than the desired level 33 of the liquid 31.

Apparently, the Patent Office alleges that Anscherlik teaches the same invention as recited in claim 1 of the present application because Anscherlik teaches supplying liquid into the bulb 1 from the storage tank 3 via the transfer vessel 8 and the connecting pipe 2. However, the process disclosed by Anscherlik is only a supplemental process to replenish the liquid.

The practical use of the pipette disclosed by Anscherlik requires that the liquid be introduced into the transfer vessel 8 via the connecting pipe 2 under pressure. Therefore, the connecting pipe 2 functions as an introducing tube, not a discharging tube as recited in claim 1 of the present invention.

Further, Anscherlik discloses that the outlet of the connecting pipe 2 is positioned lower than the desired level 33 of the liquid 31. Thus, Anscherlik cannot teach all requirements as recited in claim 1. In particular, even if the connection pipe 2 is somehow interpreted to mean the discharging tube as recited in claim 1 of the present invention, Anscherlik still does not teach or disclose a discharge tube of which the discharging inlet is positioned at the almost same level position as a desired liquid level of the liquid to be injected into the storage vessel, as recited in claim 1.

Thus, Anscherlik fails to teach or suggest the liquid treating equipment as recited in claims 1 and 8-12. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

B. Jones '527

Claims 1-3 and 9-12 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,140,527 (Jones '527). This rejection is respectfully traversed.

Jones '527 relates to mud circulation equipment used in the rotary drilling of oil wells. In contrast, the present invention relates to liquid treating equipment. Therefore, the present invention is in a different technical field than Jones '527.

Further, the mud pit disclosed in Jones '527 does not teach a discharging vessel as recited in claim 1 of the present application. The Patent Office indicates that the mud pit 12 of Jones '527 corresponds to the discharging vessel, the pipe 16 corresponds to the discharging tube, and the solid control equipment 42 corresponds to the storage vessel, respectively, of claim 1. Even, if these corresponding characteristics are accurate, it is apparent that the discharging tube is not located at the same level as the desired level of the mud 10. See Figure 1 of Jones '527. That is, Jones '527 fails to teach or suggest a discharge tube of which the discharging inlet is positioned at the almost same level position as a desired liquid level of the liquid to be injected into the storage vessel, as recited in claim 1.

Thus, Jones '527 does not teach the liquid treating equipment as recited in claims 1-3 and 9-12. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

VI. Claim Rejections Under 35 U.S.C. §103(a)

A. Claims 15-18

Claims 15-18 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Anscherlik. This rejection is respectfully traversed.

As discussed above, Anscherlik does not teach or suggest the discharge tube as recited in claim 1. Claims 15-18, directly or indirectly, depend on allowable claim 1, and are thus also allowable.

Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

B. Claim 6

Claim 6 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Anscherlik in view of U.S. Patent No. 3,909,205 (Jones '205). This rejection is respectfully traversed.

Jones '205 does not remedy any of the deficiencies of Anscherlik discussed above. In particular, the discharge tube as recited in claim 1 is nowhere taught or suggested by either Anscherlik or Jones '205.

Claim 6 directly depends on allowable claim 1, and is thus also allowable. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

C. Claim 4

Claim 4 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jones '527. This rejection is respectfully traversed.

As discussed above, Jones '527 does not teach or suggest the discharge tube as recited in claim 1. Claim 4 indirectly depends on allowable claim 1, and is thus also allowable.

Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

D. Claim 5

Claim 5 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Anscherlik or Jones '527. This rejection is respectfully traversed.

Anscherlik and Jones '527, in combination or independently, do not each or suggest the discharge tube as recited in claim 1. Claim 5 directly depends on allowable claim 1, and is thus also allowable.

Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

E. Claim 9

Claim 9 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Anscherlik. This rejection is respectfully traversed.

As discussed above, Anscherlik does not teach or suggest the discharge tube as recited in claim 1. Claim 9 directly depends on allowable claim 1, and is thus also allowable.

Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

F. Claim 12

Claim 12 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Anscherlik or Jones '527. This rejection is respectfully traversed.

Anscherlik and Jones '527, in combination or independently, do not each or suggest the discharge tube as recited in claim 1. Claim 12 directly depends on allowable claim 1, and is thus also allowable.

Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

G. Claims 12 and 13

Claims 12 and 13 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Anscherlik or Jones '527 in view of JP-101099 (JP '099). This rejection is respectfully traversed.

JP '099 does not remedy any of the deficiencies of Anscherlik or Jones '527 discussed above. In particular, the discharge tube as recited in claim 1 is nowhere taught or suggested by either Anscherlik, Jones '527 or JP '099.

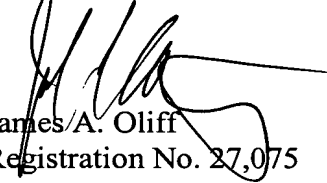
Claims 12 and 13 indirectly depend on allowable claim 1, and are thus also allowable. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

VII. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-19 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: August 30, 2004

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